

Building Administration Report

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NSLS Building Manager

On September 28th, 1978, a shovel hit the soft pay dirt of what once was a favorite place to ice skate for many employees and guests at BNL. Each day draws us closer to the 25th anniversary of Donald Stevens' (DOE) and Ari van Steenberg's (NSLS Project Head) groundbreaking event. While piecing together the activities that took place at the NSLS during 2002, one puts into perspective the vision of the people behind the push to bring the NSLS to fruition. In review, it is evident that NSLS staff and users alike continue to work together, still providing "groundbreaking" events on a regular basis.



Nathan Towne, 2-118; and Scott Buda, 2-108; Laura Miller, 2-127A; Erik Johnson, 2-129; and X.J. Wang, 2-131; Ari van Steenberg, 2-144; Sam Krinsky, (on Sabbatical), 2-143; Paul Montanez, 2-155; Diane Hatton, 2-189. Old friends that are still near to lend a helping hand after many years of dedication to the NSLS, and to the Lab as a whole, include: Manny Thomas, room 2-119, Marty Woodle, Tom Dickinson and Joe Sheehan, who all reside in Bldg. 728. New Facility Support Representatives from the Radiation Control Division include Steve Musolino and Earle Edwards, found in offices 1-177 and 1-174, respectively.

Temporary ITD staff assigned to the NSLS is located in office 2-111.

Security Concerns:

We are still trying to cope with the trickle down effects relating to the events of September 11, 2001. Tighter security is noticed at the Lab's Main Entrance, as well as increased requirements to access the NSLS Experimental areas. New rules and regulations affect the placement of such items as refuse containers and dumpsters. Packages must not be left unattended, and certain rooms within Bldg. 725 with restricted and limited access have been deemed as PPA's (Property Protection Areas). Many members of the Laboratory staff are working behind the scenes to resolve these issues in the least intrusive way as possible. Your patience and cooperation during these changing times has been appreciated.

Office space:

All users with offices located in Bldg. 510E were transferred to new quarters in Bldg. 535A and 535M. Additional space will become available in 535A upon the final movement of equipment assigned to the Laboratory Personnel Monitoring Group. The second floor of the NSLS has taken on a new appearance with the addition of the Information and Outreach office, headed up by Lisa Miller in room 2-102. NSLS staff residing in this office includes Nancye Wright, Patrice Pages and Steve Giordano. Other familiar faces in new locations at the NSLS include: Al Boerner, 2-112;

Construction Projects:

The NSLS 2nd floor office addition has seen projected start up dates come and pass, due to a number of complicated issues. Liquid nitrogen lines near the tank farm, on the northwest side of the NSLS, have been relocated in advance of the construction activities. Major work has been ongoing for the X17 B2/B3 projects, as the two new lead-lined hutches were installed by Calder-Fabcast in the last quarter of 2002. Interlock and utility work continue as the anticipated commissioning dates of the new hutches approach. On a smaller scale, the Beamline Development and Support Group's Crystal Cutting room, found in the basement of Bldg. 535, has been expanded and now facilitates the use of a new crystal grinder, able to hold better dimensional tolerances and polish larger crystals than equipment previously utilized.

Facility Upgrades:

New flat panel technology has been installed in the main lobby of the NSLS, and both the employee directory and the four informational Beam Status Monitors were fired up this past spring. Revamping the liquid nitrogen fill station near the west roll-up doors helped make the process easier and safer for filling both the large and small dewars. Plant Engineering

provided us with over 200 man hours for maintenance painting to some of our most commonly used areas on the experimental floor. They also installed 2 back-flow prevention devices on the main domestic water feeds to Bldg. 725, replacing older units that no longer met the stricter DEC and SCDOH standards set by the Department of Environmental Conservation (DEC) and Suffolk County Department of Health. New vending machines, with a slightly varied selection of food products, were installed within the experimental areas.

Winter Shutdown:

Without a doubt, the most highly visible project on the X-ray ring during the 2002 Winter Shutdown was the re-vamping of the X29 front end and sawtooth conversion projects. The redesigned sawtooth and plug door assembly was installed to allow room for the future construction of the new Mini Gap Undulator (MGU) beamline, championed by the Albert Einstein College of Medicine, BNL's Biology Department, and the NSLS. Existing water piping, water manifolds, and electrical wiring were rerouted to accommodate the X29 beamline expansion project, coupled with the installation of the MGU base mounting feet inside the X-ray tunnel. Two new sets of Pick-Up Electrodes (PUE's) for the active interlock system were installed, along with a set of VAT isolation valves, that will facilitate the insertion of the MGU during the Spring, 2003 shutdown.

Simultaneously, a major effort in the x-ray ring during the 2002 winter shutdown was the installation of

the a third, all copper, radio frequency (RF) cavity, replacing the original System #4 cavity. The new RF cavity provides superior cooling for more efficient heat transfer, has eliminated water to vacuum joints, and incorporates independent real-time RGA scans. In addition, the improved interior vacuum surfaces provide for higher power capabilities and a better vacuum for enhanced X-ray beam performance. A redesigned input drive loop and vacuum window allow for a more reliable, higher power operation. Due to the cavity's weight, a complete stress analysis was performed and approved by the BNL Critical Lift Safety Review Committee, while necessary fixtures were installed without impact to the RF cavity installation schedule. This cavity is one of a straight section pair of new cavities, each capable of being isolated with the abovementioned VAT isolation valves, allowing for the future insertion of the X29 MGU.

Beam Position Monitor (BPM) wiring was pulled inside the X-ray ring and run to equipment racks located at strategic points around the perimeter of the X-ray experimental floor. Electric solenoids controlling air cylinders within the booster to the VUV transport tunnel were removed and placed outside of the tunnel for ease of service in case of mechanical or electrical failure.

In conclusion, it can be seen that numerous activities and programs continue to thrive, as the pulse of the NSLS is alive and well. We continue to do our best to provide staff and users with the services one would expect from a world-class facility.